

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-32. (cancelled)

33. (Previously Presented) A system for color mapping , the system comprising:

a source device capable of producing an image from image data using a source device profile;

a destination device capable of reproducing said image from the image data using a destination device profile; and

a computer system operatively connecting said source device and destination device, said computer system including:

a source device profile interpreter that interprets the source device profile to convert coordinates in a source device color space to a device-independent color space;

a destination device profile interpreter that interprets the destination device profile to convert coordinates in a destination device color space to the device-independent color space; and

a color transformer that generates a color map defining a relationship between the source and destination device color spaces based on the converted coordinates and user preferences, said user preferences being specified by a user to configure the color transformer,

wherein the color transformer generates the color map in part by reducing color error between said converted coordinates from the source and destination device profile interpreters, the color transformer, in said reducing, at least adjusting coordinates in the destination device color space to generate adjusted coordinates, the color map being based in part on said adjusted coordinates in the destination device color space, and

wherein the source and destination device profile interpreters use forward transformation profiles to produce said converted coordinates.

34. (Previously Presented) A system for color mapping , the system comprising:

- a source device capable of producing an image from image data using a source device profile;

- a destination device capable of reproducing said image from the image data using a destination device profile; and

- a computer system operatively connecting said source device and destination device, said computer system including:

  - a source device profile interpreter that interprets the source device profile to convert coordinates in a source device color space to a device-independent color space;

  - a destination device profile interpreter that interprets the destination device profile to convert coordinates in a destination device color space to the device-independent color space; and

  - a color transformer that generates a color map defining a relationship between the source and destination device color spaces based on the converted coordinates and user preferences specified by a user independently of the source and destination device profiles, wherein the source device profile characterizes a source device and contains raw spectral data used to construct said source device profile, and the destination device profile characterizes a destination device and contains raw spectral data used to construct said destination device profile.

35. (Previously Presented) A system for color mapping , the system comprising:

- a source device capable of producing an image from image data using a source device profile;

- a destination device capable of reproducing said image from the image data using a destination device profile; and

- a computer system operatively connecting said source device and destination device, said computer system including:

  - a source device profile interpreter that interprets the source device profile to convert coordinates in a source device color space to a device-independent color space;

a destination device profile interpreter that interprets the destination device profile to convert coordinates in a destination device color space to the device-independent color space; and

a color transformer that generates a color map defining a relationship between the source and destination device color spaces based on the converted coordinates and user preferences, said user preferences being specified by a user independently of the source and destination device profiles;

wherein the source device profile defines a forward transformation from the source device color space to the device-independent color space; and

wherein the destination device profile defines a forward transformation from the destination device color space to the device-independent color space.

36. (Previously Presented) The system of claim 33, wherein the color map is a look-up table.

37. (Previously Presented) The system of claim 33, wherein the color map is a mathematical expression.

38-46. (cancelled)

47. (Previously Presented) A system for color mapping, the system comprising:

a source device capable of producing an image from image data using a source device profile;

a destination device capable of reproducing said image from the image data using a destination device profile; and

a computer system operatively connecting said source device and destination device, said computer system being programmed to include:

means for interpreting the source device profile to convert coordinates in a source device color space to a device-independent color space;

means for interpreting the destination device profile to convert coordinates in a destination device color space to the device-independent color space; and

means for generating a color map defining a relationship between the source and destination device color spaces based on the converted coordinates and user preferences specified by a user independently of the source and destination device profiles,

wherein the means for generating a color map generates the color map in part by reducing color error between said converted coordinates from the means for interpreting the source device profile, and the means for interpreting the destination device profile, said reducing at least adjusting coordinates in the destination device color space, the color map being based in part on said adjusted coordinates in the destination device color space; and

wherein the means for interpreting the source device profile, and the means for interpreting the destination device profile each use forward transformation profiles to produce the converted coordinates.

48. (Previously Presented) The system of claim 47, wherein said means for interpreting the source device profile, and the means for interpreting the destination device profile are configured to include illuminant functions.

49. (Previously Presented) The system of claim 47, wherein said means for interpreting the source device profile, and the means for interpreting the destination device profile are configured to include observer functions.

50. (Previously Presented) The system of claim 47, wherein the means for generating a color map adjusts the means for interpreting the source and destination device profiles based on the user preferences.

51. (Previously Presented) A method implemented, at least in part, by one or more computers, the method comprising:

producing an image from image data using a source device profile;

and

reproducing said image from the image data using a destination device profile;

wherein said reproducing further comprises:

interpreting the source device profile to convert coordinates in a source device color space to a device-independent color space;

interpreting the destination device profile to convert coordinates in a destination device color space to the device-independent color space;

generating a color map defining a relationship between the source and destination device color spaces based on the converted coordinates and user preferences specified by a user independently of the source and destination device profiles; and

using the color map to map colors between an image produced by a source device having said source device profile and a reproduction of said image produced by a destination device having said destination device profile;

wherein generating a color map includes generating the color map in part by reducing color error between the converted coordinates generated from interpreting the source device profile and the converted coordinates generated from interpreting the destination device profile, said reducing at least adjusting coordinates in the destination device color space, the color map being based in part on said adjusted coordinates in the destination device color space; and

wherein interpreting the source and destination device profiles includes using forward transformation profiles to produce the converted coordinates.

52. (Previously Presented) The system of claim 51, wherein said interpreting the source device profile and said interpreting the destination device profile are configured to include illuminant functions.

53. (Previously Presented) The system of claim 51, wherein said interpreting the source device profile and said interpreting the destination device profile are configured to include observer functions.

54-59. (cancelled)

60. (Previously Presented) The system of claim 33, wherein said source and destination device profile interpreters are configured to include illuminant functions.

61. (Previously Presented) The system of claim 33, wherein said source and destination device profile interpreters are configured to include observer functions.

62-63. (cancelled)

64. (Previously Presented) The system of claim 33, wherein the source and destination device profile interpreters are configured to include white- and black-point parameters to account for color variations between media and colorants used by different color display devices.

65-66. (cancelled)

67. (Previously Presented) The system of claim 35, wherein the source and destination device profile interpreters are configured to include white- and black-point parameters to account for color variations between media and colorants used by different color display devices.

68.-75 (cancelled).